

0984869 050301

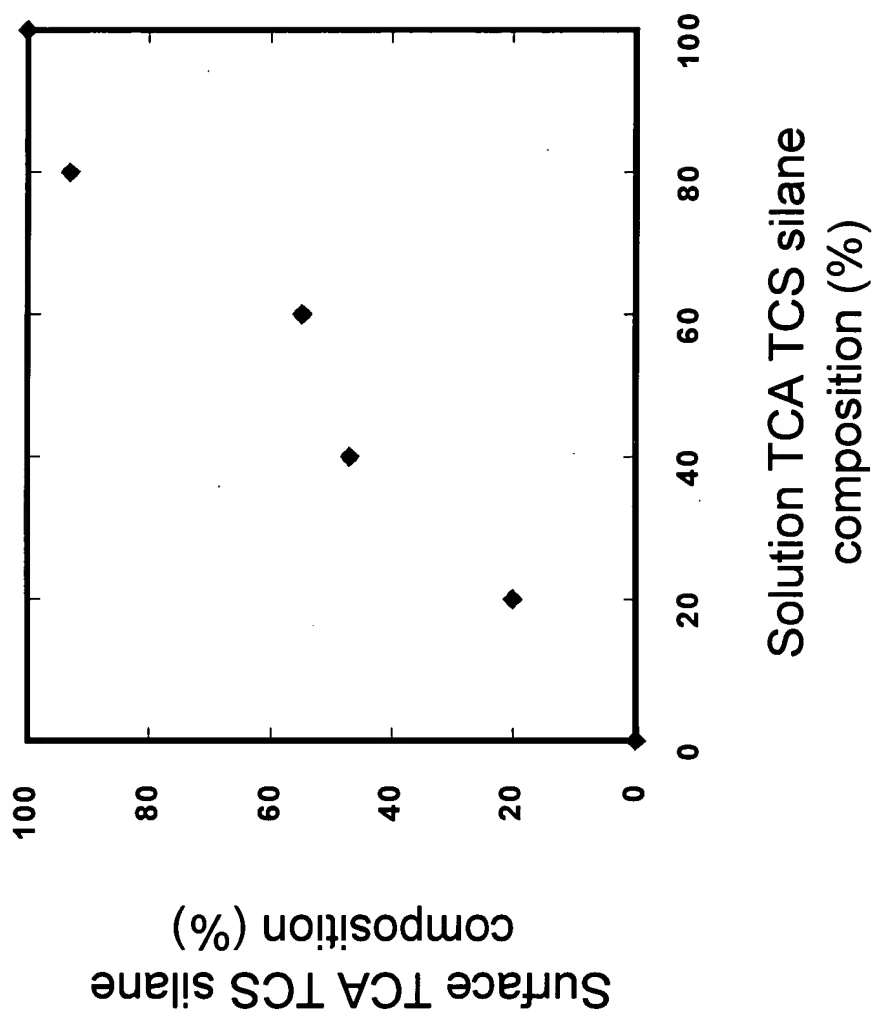
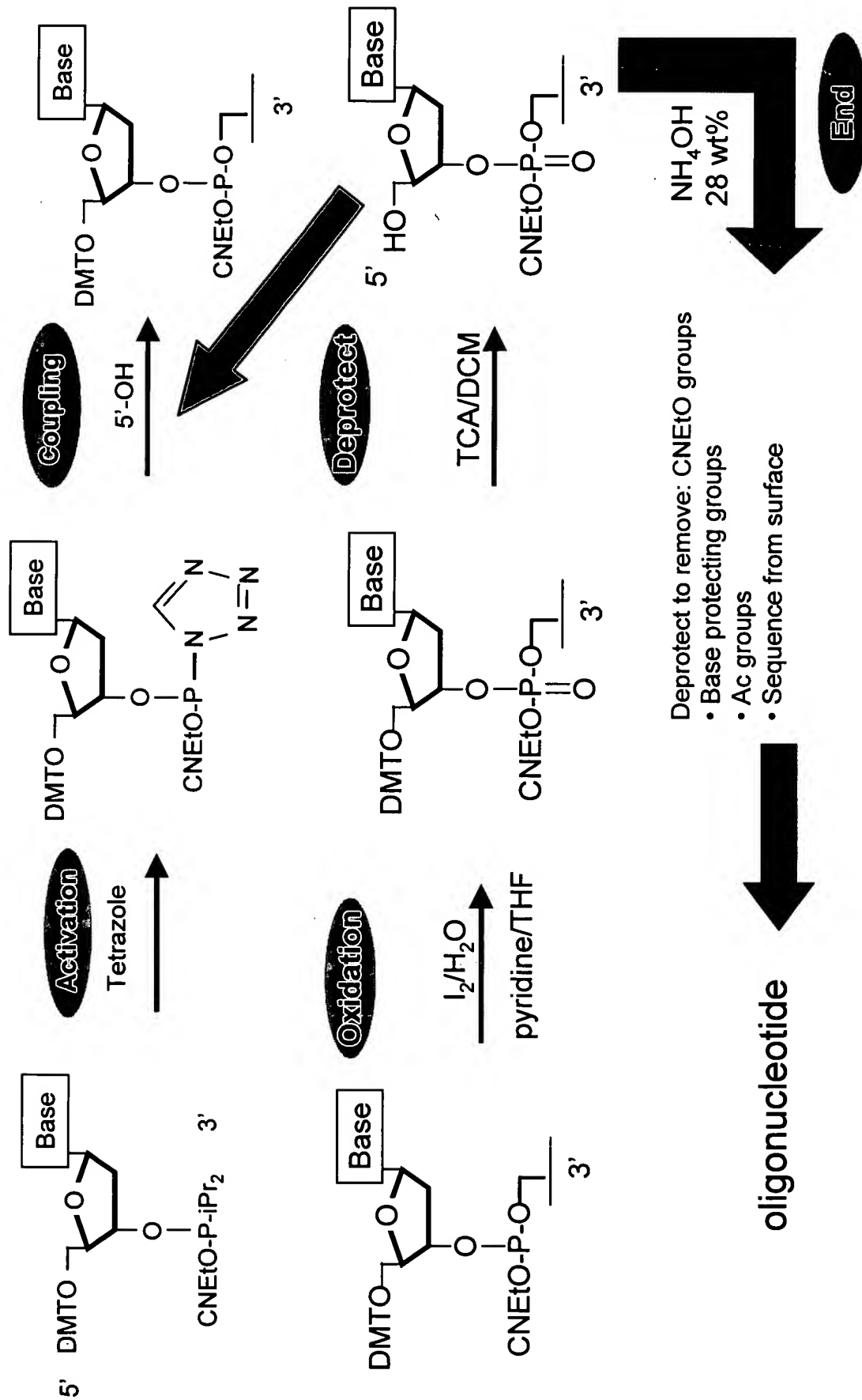
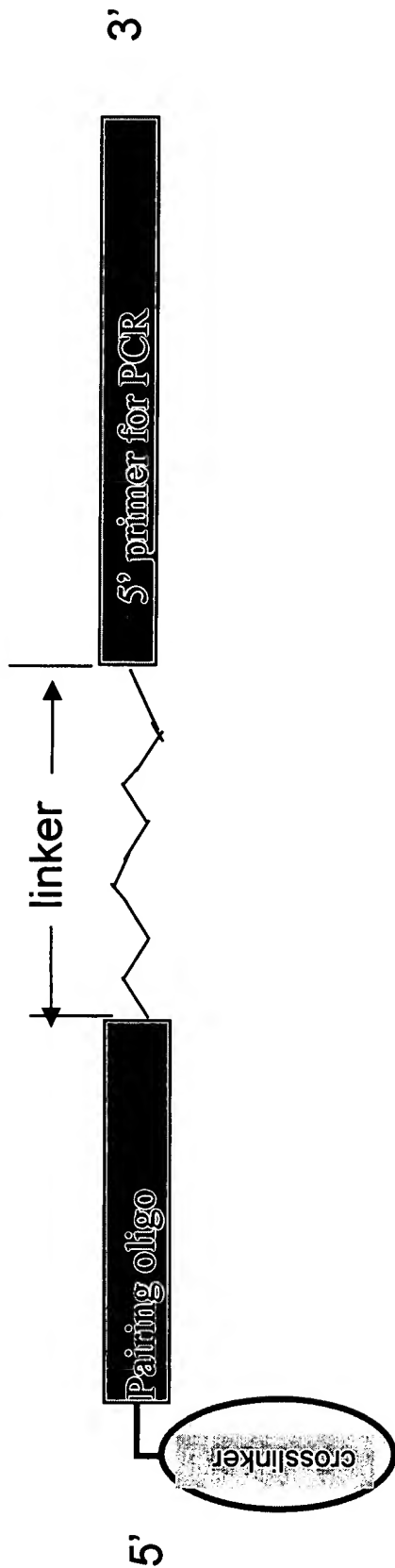


Figure 1



\* CNEtO=cynoethanol, iPr=isopropyl, DMT=dimethyl trityl, Ac=acetyl, TCA=trichloroacetic acid, DCM= $CH_2Cl_2$

Customized PCR 5' Primer



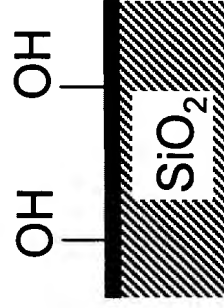
PCR Product with 5' Dangling End



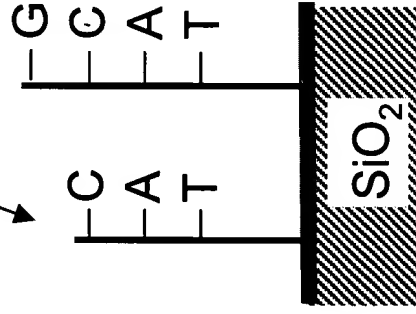
Figure 3

1. Coupling
2. Capping
3. Oxidation
4. Deprotection

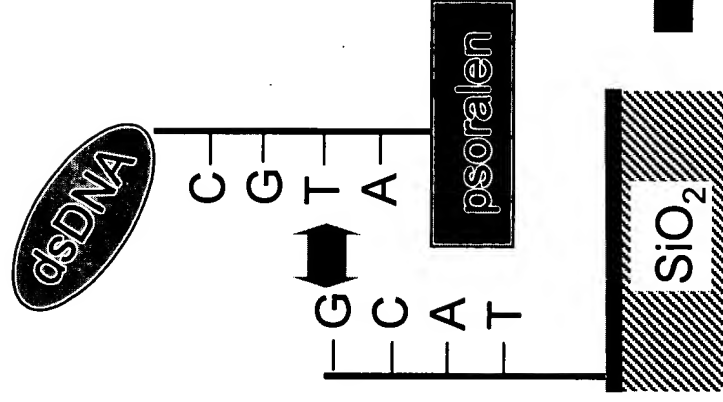
G



Derivatize  
reactive surface

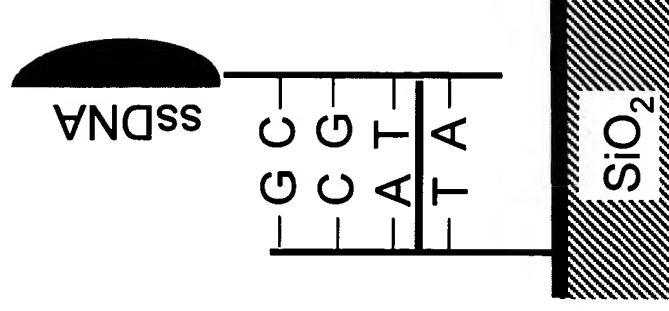


Stepwise oligo  
synthesis



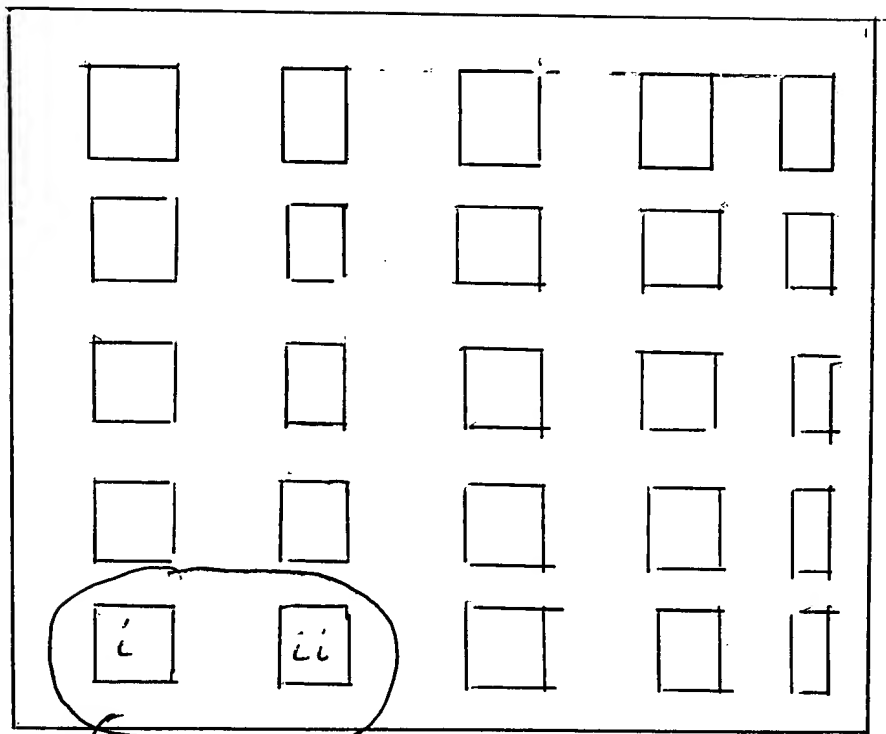
Hybridize dsDNA  
with dangling end

Crosslink  
+

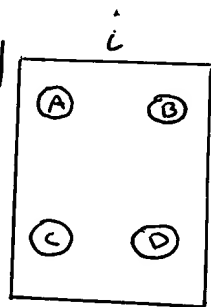


Crosslink dsDNA  
and heat to expose  
ssDNA probe

A



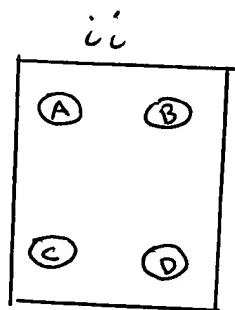
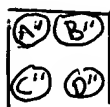
B



+

$A' - A''$   
 $B' - B''$   
 $C' - C''$   
 $D' - D''$

↓



+

$A' - E''$   
 $B' - F''$   
 $C' - G''$   
 $D' - H''$

↓

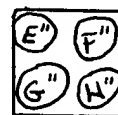
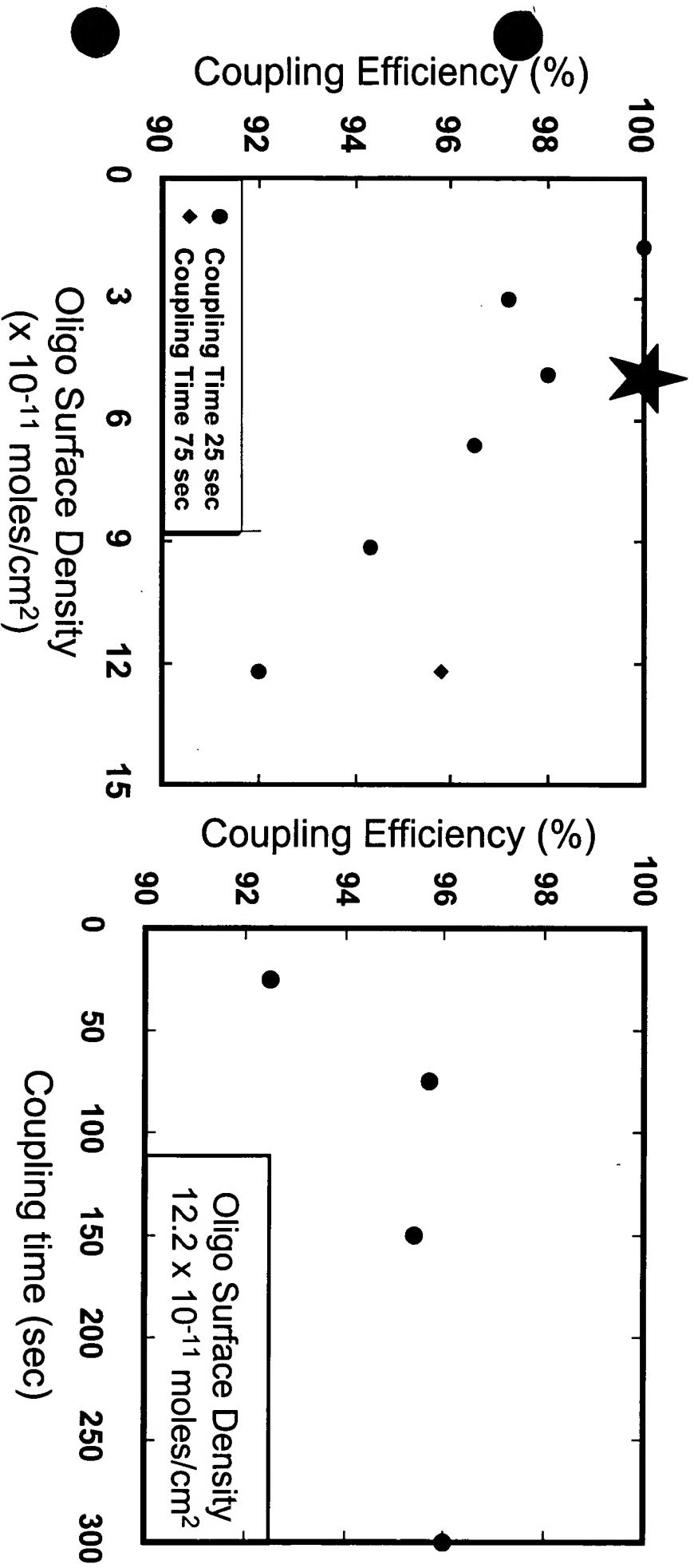


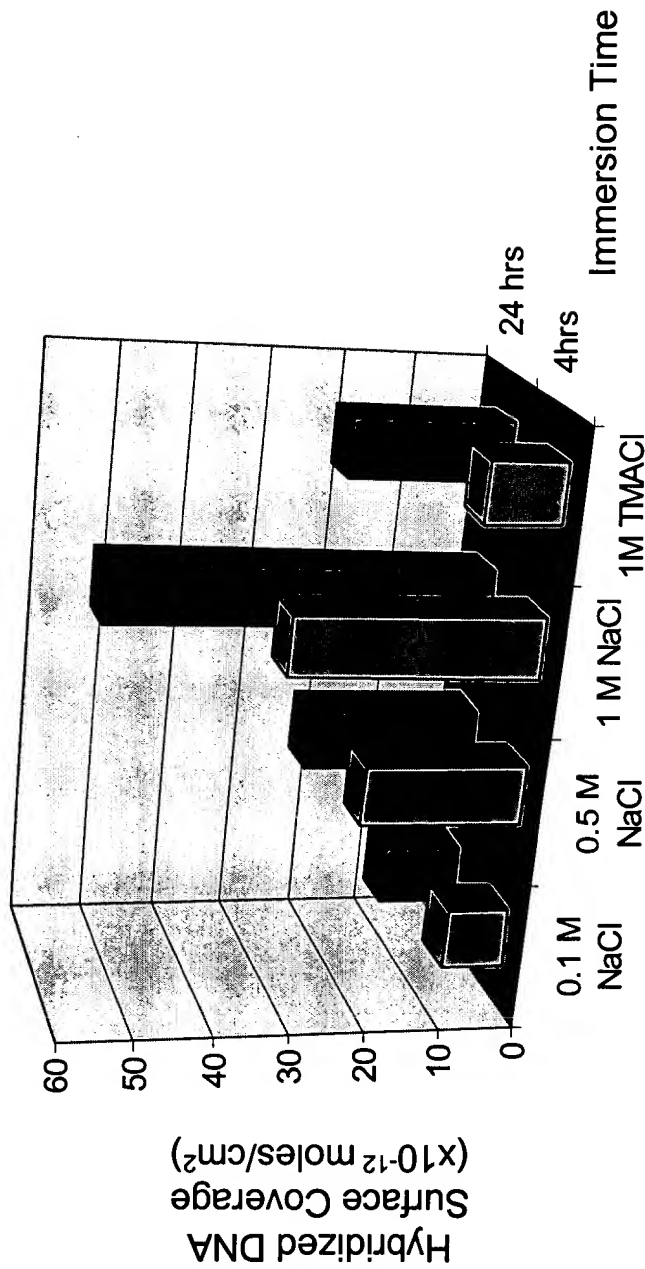
Figure 5



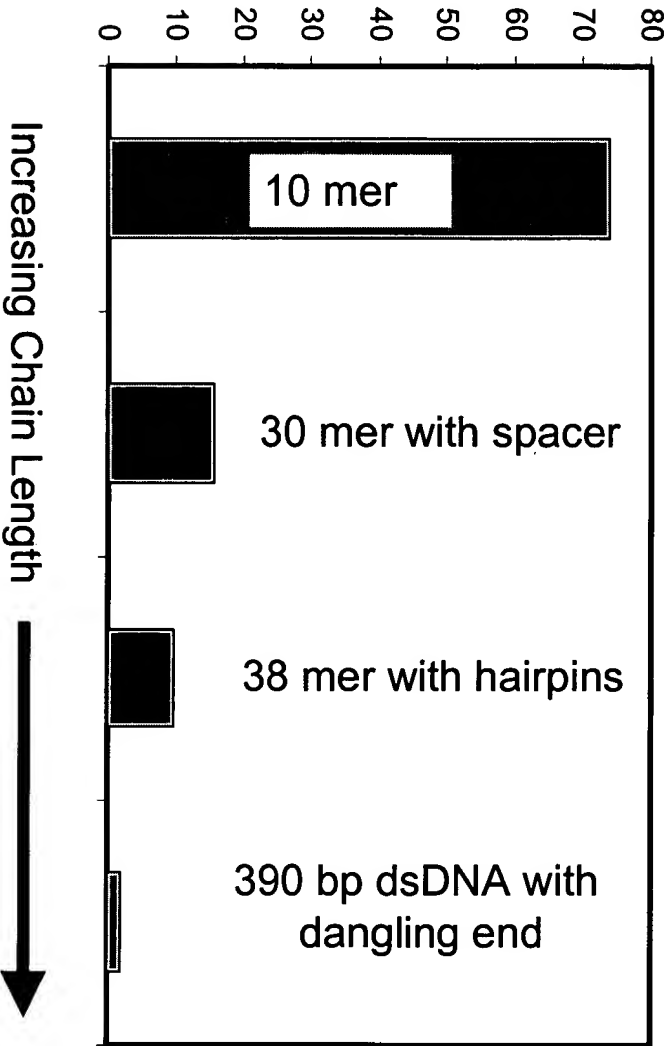
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Figure 6

\* Oligo solution concentration = 0.5  $\mu$ M  
 Hybridization temperature = 4°C  
 OH silane oligo (40%)



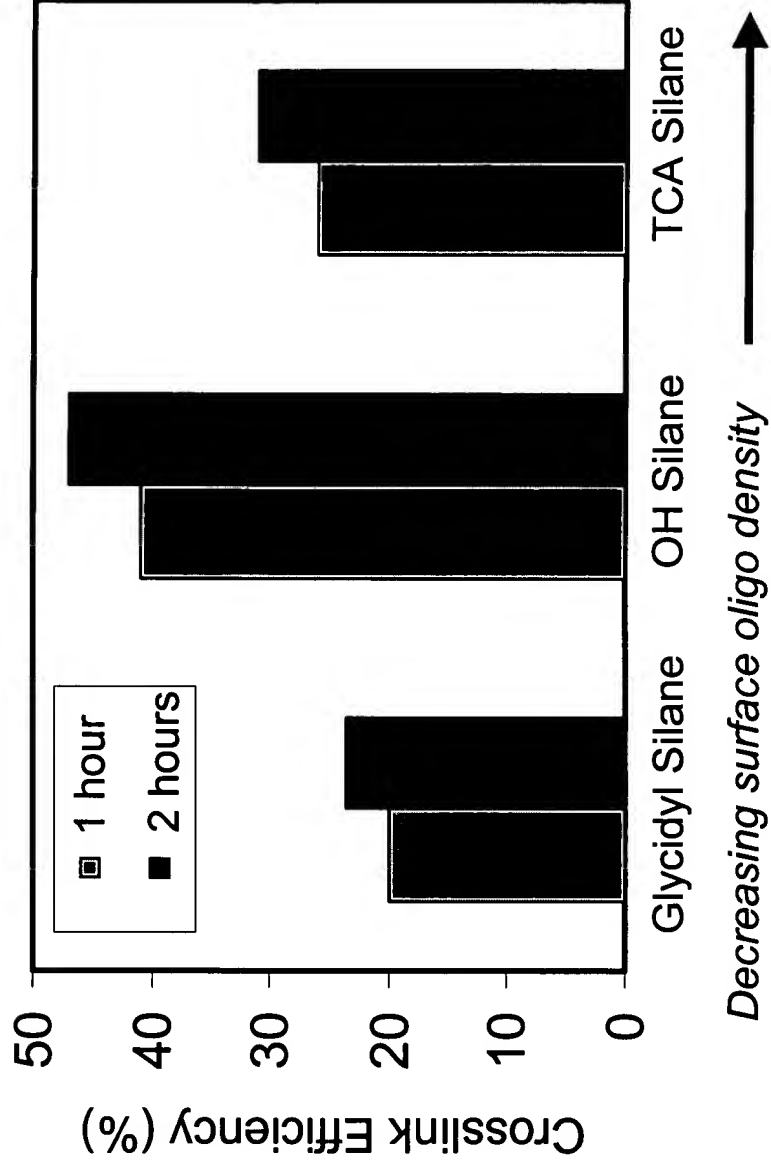
Hybridization Yield  
( $\times 10^{-13}$  moles/cm<sup>2</sup>)



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Figure 2





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